## THE ROCKEFELLER UNIVERSITY

pro bono humanis generis 1230 YORK AVENUE - NEW YORK, NEW YORK 10021-6399

OFFICE OF THE PRESIDENT

December 28, 1987

## Dear Dr. Chandrasekhar:

I am writing to you nmainly to express my appreciation for my enjoyment of "Truth and Beauty". I have seen some of these essays before, but am glad to have them conveniently collected.

In many respects, there are differences between biology and physics: rarely do we have similar opportunities for blinding beauty in our findings -- it is still fun to figure out how the Watchmaker put together our biological machines, however much more idiosyncratic and arbitrary in detail they are compared to the foundations of physics. I take the liberty of sending you a brief memoir that may give some hint of how our motivational orientations may still overlap.

My particular comment to you is about age and productivity, about which you made several comments. For my own part, I am more like the physicists: my most important work was certainly what I did as a 21-year old. I have all kinds of reflections why the particular opportunity for intellectual contribution changed after a decadal spurt: above all I had opened up a new field; its texture was very different thereafter. And no one has accused me of abandoning science (except perhaps 9 years ago when I assumed my present post -- and that would be a most superficial assessment.) I was very much tempted to join you at the Fermi Institute when Szilard generated an offer in 1949; and I have often pondered whether I missed a unique intellectual stimulus by deciding to stay at Madison. My interest in cosmology goes deeper than my competence! Howbeit, I read with some resonant lament what you quoted of Yukawa, closing his autobiography in 1934.

I do know a number of biologists who did their best work just before retirement (O.T. Avery; William Trager), or continued a lifetime of productivity rather like Rayleigh: Arthur Kornberg.

But I have a particular question to ask of you, namely about the membership of the NAS. At present, the youngest electee is Freedman (at age ~ 37).



The youngest current members of the NAS name, date of birth

CECH THOMAS R 12/08/1947
TARJAN ROBERT ENDRE 04/30/1948
FEFFERMAN CHARLES L 04/18/1949
HOOFT GERARDUS 'T 12/ /1950
RUBIN GERALD M. 03/31/1950
FREEDMAN MICHAEL HARTLEY 04/21/1951

Historically, a number have been elected much younger:

youngest electees from historical records (among currently active) (grouped by age at election)
name year Section
elected

30 Fefferman CL 1979 11

31 Schwinger J 1949 13 Gell-Mann M 1960 13

32 J. Lederberg 1957 26 Milnor JW 1963 11 Pauling L 1933 14 33 Anderson CD 1938 13 Cohen PJ 1967 11 Freedman MH 1984 11 Goldreich PM 1972 16 MacDonald G 1962 16 Thorne KS 1973 12

34
Hooft G 'T 1984 13
Press F 1958 16
Watson JD 1962 26
Wood WB iii 1972 26

I would like to start a drive in the NAS to be sure we are not overlooking young genius. Can you think of some youngsters (<= 35, let's say) in the fields you know best? Or is there a sea change in contemporary science?

It would be a great treat to meet you someday, at last. Have you occasion to visit New York?

Yours sincerely,

Joshua Lederberg